

Table 9
After Tax and Interest Rates of Return

	Return on Revenues (%)					Return on Assets (%)					Return on Equity (%)				
	1989	1990	1991	1992	1993	1989	1990	1991	1992	1993	1989	1990	1991	1992	1993
Wireless Service Company															
AirTouch Communications Inc.	NA	NA	NA	NM	3.8	NA	NA	NA	NM	1.2	NA	NA	NA	NM	3.8
Lin Broadcasting	22.9	NM	NM	NM	NM	9.1	NM	NM	NM	NM	12.5	NM	NM	NM	NM
McCaw Cellular Communications	NM	35.8	NM	NM	NM	NM	6.3	NM	NM	NM	NM	23.0	NM	NM	NM
Mobile Telecommunications Tech	NM	NM	NM	NM	12.9	NM	NM	NM	NM	5.8	NM	NM	NM	NM	9.0
Nextel Communications	NA	NM	NM	NM	NA	NA	NM	NM	NM	NA	NA	NM	NM	NM	NA
US Cellular Corp	NM	NM	NM	3.8	NM	NM	NM	NM	0.8	NM	NM	NM	NM	1.5	NM
Vanguard Cellular Sys.	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM

Source: Standard and Poor's, *Industry Surveys: Telecommunications, Basic Analysis*, June 2, 1994.

Table 10
Growth of Net Plant and Reinvestment of Profits
Large Markets

	1990		1991		1992		1993		Totals
LA Cellular	\$96,688,679	58.5%	\$114,743,744	52.4%	\$123,679,819	51.6%	\$117,062,349	47.0%	100.4%
	\$79,035,183	62.8%	\$28,050,707	13.7%	\$13,314,843	5.7%	\$5,953,922	2.4%	
	\$17,653,496	81.7%	\$86,693,037	24.4%	\$110,364,976	10.8%	\$111,108,427	5.1%	
LA SMSA	\$78,333,706	43.3%	\$75,885,956	34.8%	\$67,588,920	28.0%	\$107,060,669	33.8%	73.2%
	\$47,999,081	30.7%	\$26,880,596	13.1%	\$19,490,570	8.4%	\$20,301,980	8.1%	
	\$30,334,625	61.3%	\$49,005,360	35.4%	\$48,098,350	28.8%	\$86,758,689	19.0%	
Bay Area	\$30,154,000	48.1%	\$34,169,000	43.5%	\$43,421,000	31.1%	\$46,965,000	49.5%	93.8%
	\$20,939,820	40.2%	\$10,665,985	14.6%	\$12,803,201	15.2%	\$4,490,405	4.6%	
	\$9,214,180	69.4%	\$23,503,015	31.2%	\$30,617,799	29.5%	\$42,474,595	9.6%	
GTE	\$14,093,498	15.8%	\$19,561,031	16.4%	\$27,987,242	20.0%	\$56,820,926	18.1%	160.5%
	\$38,022,816	108.4%	\$15,119,123	26.1%	\$24,054,868	49.1%	\$2,773,285	32.8%	
	(\$23,929,318)	269.8%	\$4,441,908	77.3%	\$3,932,374	85.9%	\$19,676,415	65.4%	
Pactel	\$9,420,334	32.9%	\$8,695,668	23.9%	\$9,029,050	21.4%	\$13,763,336	30.4%	73.4%
	\$4,967,020	19.0%	\$10,638,868	34.2%	\$798,841	1.9%	\$2,773,285	6.5%	
	\$4,453,314	52.7%	(\$1,943,200)	122.3%	\$8,230,209	8.8%	\$10,990,051	20.1%	
US West	\$2,061,320	9.0%	(\$2,289,155)	-4.3%	(\$3,306,232)	-7.4%	\$1,105,499	2.9%	91.2%
	\$11,169,558	72.4%	\$7,654,099	23.5%	(\$4,086,613)	-10.2%	\$4,749,174	16.5%	
	(\$9,108,238)	541.9%	(\$9,943,254)	na	\$780,381	na	(\$3,643,675)	429.6%	
% of Profit	87.6%		39.5%		24.7%		13.4%		

See Table 11 for source and key.

Table 11
Growth of Net Plant and Reinvestment of Profits
Middle Markets

	1990		1991		1992		1993		Totals
Sacramento Cellular	\$5,807,217	21.4%	\$9,319,977	22.1%	\$11,584,920	22.2%	\$13,084,721	17.4%	166.8%
	\$12,470,559	59.5%	\$11,740,368	35.1%	\$2,601,171	5.1%	\$8,130,246	15.2%	
	(\$6,663,342)	214.7%	(\$2,420,391)	126.0%	\$8,983,749	22.5%	\$4,954,475	62.1%	
Sacramento Valley	\$3,146,079	10.1%	\$1,161,634	2.8%	\$408,726	0.8%	\$3,816,168	6.4%	151.5%
	\$11,925,787	47.4%	\$9,107,329	24.6%	\$9,233,474	20.0%	\$7,855,037	14.2%	
	(\$8,779,708)	379.1%	(\$7,945,695)	784.0%	(\$8,824,748)	2259%	(\$4,038,869)	205.8%	
Fresno Cellular	\$1,206,532	11.9%	\$3,691,182	24.0%	\$7,020,723	31.3%	\$7,386,001	25.7%	276.4%
	\$3,499,594	41.9%	\$7,041,408	59.4%	\$7,083,749	37.5%	\$5,478,937	21.1%	
	(\$2,293,062)	290.1%	(\$3,350,226)	190.8%	(\$63,026)	100.9%	\$1,907,064	454.1%	
Fresno MSA	\$3,102,821	8.0%	\$3,259,573	7.6%	\$6,078,225	11.2%	\$7,810,658	10.7%	157.8%
	\$3,165,709	14.2%	\$4,200,037	17.3%	\$13,360,763	49.2%	\$14,496,542	38.1%	
	(\$62,888)	102.0%	(\$940,464)	128.9%	(\$7,282,538)	219.8%	(\$6,685,884)	467.2%	
Santa Barbara	(\$465,319)	-10.4%	(\$632,347)	-9.7%	\$406,513	5.0%	\$1,150,016	10.5%	293.4%
	\$2,375,008	72.0%	\$1,750,983	30.9%	\$1,473,543	19.9%	\$4,073,408	45.8%	
	(\$2,840,327)	na	(\$2,383,330)	-277%	(\$1,067,030)	362.5%	(\$2,923,464)	354.2%	
GTE of Santa Barb.	\$110,579	2.0%	\$781,663	8.5%	\$681,700	6.7%	\$1,495,884	7.5%	382.7%
	\$756,332	14.7%	\$6,514,901	110.5%	\$5,960,377	82.7%	\$6,448,918	48.9%	
	(\$645,753)	684.0%	(\$5,733,238)	833.5%	(\$5,278,677)	874.3%	(\$4,953,034)	431.1%	
% of Profit	264.9%		229.5%		151.7%		133.8%		

Key

After-Tax Income	Rate of Return
Increase in Net Plant	% Increase in Net Plant
Net Cash Flow	% of Profits Reinvested

Table 12
Investment By Cable TV Providers

Operator	1989		1993	
	Net Plant (Millions)	Households Passed (Thousands)	Net Plant (Millions)	Households Passed (Thousands)
Adelphia	320.4	1365.7	398.9	1758
Cablevision Systems	521.0	2429.6	643.5	3563
Century Communications	352.5	1500	431.9	1653
Comcast	612.9	2638.6	1021.0	4219
C-TEC	266.2	287.7	343.8	417
E.W. Scripps	552.4	961	712.7	1159
Falcon Cable	63.4	1048	66.8	1287
Galaxy Cable M.L.P	34.3	116.9	18.9	76
Jones Spacelink	159.1	2146.6	194.9	2163
Media General	421.7	282.2	515.2	324
Multimedia	175.4	598.8	240.8	694
TCA Cable	121.1	677.5	106.4	645
Tele-Communications	4179	9461.2	4935	17425
Times Mirror	1543.6	1846.7	1756.3	2069
Time Warner	2944	3317	3866	12012
Viacom	380.3	1653.3	554.2	1730
Totals	12647.3	30330.8	15806.3	51194
Net Plant per Household passed	\$417		\$309	

Source: Paul Kagan Associates, Inc., "The Cable TV Financial Databook," June 1990, June 1994.

Table 13
Telephone Company Investment

	1989 Gross Plant (Thousands)	1989 Net Plant (Thousands)	1993 Gross Plant (Thousands)	1993 Net Plant (Thousands)	% Increase in Gross Plant	% Increase in Net Plant
All Reporting LECs*	233,445,021	149,538,600	263,556,374	156,380,052	12.9%	4.6%
7 RBOC's	187,215,720	119,574,753	207,636,503	122,693,261	10.9%	2.6%
AT&T Communications, Inc.	26,116,103	16,135,201	25,231,150	16,130,858	-3.4%	-0.0%

Note: In total, all reporting carriers reinvested about 11% of net profits (before interest).

* LECs must report these data to the FCC if their gross revenues exceed \$100 million. There were 53 reporting entities in 1989, 55 in 1993.
Source: Federal Communications Commission, Statistics of Communications Common Carriers, 1989/1990, 1993/1994.

TABLE 14
Reordering Hausman's Table

MSA No. In Hausman Table	MSA	Population	Monthly Price	Regulated
2	Los Angeles	13862513	99.99	Yes
1	New York	13698478	110.77	Yes
3	Chicago	7261176	58.82	
4	Philadelphia	4856881	80.98	
5	Detroit	4531636	66.76	
7	Boston	4029662	82.16	Yes
6	Dallas	3949075	59.78	
9	San Francisco	3686582	99.47	Yes
8	Washington	3660758	76.89	
10	Houston	3493644	80.33	

Using CMSA Pops

MSA No. In Hausman Table	Cluster	Population	Monthly Price	Regulated
2	Los Angeles	13862513	99.99	Yes
1	New York	13698478	110.77	Yes
3	Chicago	7865702	58.82	
4	Philadelphia	6107248	80.98	
8	Washington	6008977	76.89	
9	San Francisco	5184169	99.47	Yes
7	Boston	4739367	82.16	Yes
5	Detroit	4531636	66.76	
6	Dallas	4044096	59.78	
10	Houston	3711043	80.33	

Hausman notes that the average price in regulated MSAs is 39% higher than in unregulated MSAs. We note that average population in regulated clustered MSAs is 74% higher than in unregulated clustered MSAs. MSA to MSA, the difference is 91%.

TABLE 15

We used the confidential data provided by California, supplemented by information on growth by specific carriers during 1994, filed in *ex parte* presentations, to estimate demand relations. Two such regressions are included below.

Regression 1

Dependent Variable is Logit(Penetration)

	Coefficient	Std. Error	T-Statistic	Prob.
Constant	-14.33973	2.319734	-6.181625	0.0000
Log(Highinc)	1.425076	0.353007	4.036957	0.0001
Log(Age)	1.045669	0.118845	8.798619	0.0000
Log(Drive Time)	6.334967	1.190043	5.323310	0.0000
Log(Pops)	-0.864417	0.134228	-6.439905	0.0000
Log(P120/GCPI)	-1.261171	0.354760	-3.554996	0.0007
Observations:	76			
R-squared	0.723044			
Adjusted R-squared	0.703262			

Regression 2

Dependent Variable is Logit(Penetration)

	Coefficient	Std. Error	T-Statistic	Prob.
Constant	0.540140	0.680719	0.793485	0.4308
Log(Highinc)	0.101609	0.190845	0.532417	0.5965
Log(Age)	-0.250573	0.114829	-2.182142	0.0333
Log(P120/GCPI)	-0.327574	0.215884	-1.517358	0.1348
Log(Lagged Penetration)	0.806344	0.052959	15.22596	0.0000
Observations:	61			
R-squared	0.875118			
Adjusted R-squared	0.866197			

“Penetration” is Subscribers/Population; “Age” is the number of months since construction of the system; “Pops” is the population based on the 1990 census; “High Income” is the percent of households with income greater than \$50,000 in 1991; “Drive Time” is the average number of minutes to commute to work; “P120” is the best price for 120 minutes available from a carrier; “GCPI” is the general Consumer Price Index. Sources: 1992 Survey of Buying Power Demographic USA, 1990 US Census and Cellular Communications Licensees (Wholesalers) Annual Reports to the Public Utilities Commission, State of California.

Table 16

To obtain an estimate for the rate of return for the whole state, we used the following two regressions to estimate rate of return and gross plant:

Regression No. 1

Dependent Variable is Ln(GROSSPLANT)

	Coefficient	Std. Error	T-Statistic	Prob.
Constant	0.379602	1.642788	0.231072	0.8178
Ln(YEAR-1983)	1.553820	0.474709	3.273203	0.0015
Ln(POPS)	0.957653	0.059366	16.13130	0.0000
RSA	-0.819740	0.231829	-3.535974	0.0006
Ln(Age)	-0.359661	0.296603	-1.212601	0.2284
Ln(Age)2	0.089599	0.067273	1.331876	0.1862
Wireline	-0.142455	0.096554	-1.475390	0.1436
Observations:	98			
R-squared	0.963382			
Adjusted R-squared	0.960967			

Regression No. 2

Dependent Variable is Ln(Rate Of Return+100)

	Coefficient	Std. Error	T-Statistic	Prob.
Constant	0.962987	0.613016	1.570900	0.1196
Ln(Pops)	0.162373	0.023126	7.021266	0.0000
Wireline	0.039833	0.028285	1.408258	0.1624
Min(0, Age-48)	-0.010266	0.001800	-5.703254	0.0000
Max(0, 48-Age)	-0.000992	0.001927	-0.514704	0.6080
ln(High Income)	0.045439	0.052989	0.857512	0.3933
ln(Year - 1983)	0.821929	0.149831	5.485705	0.0000
Observations:	101			
R-squared	0.639238			
Adjusted R-squared	0.616210			

“Age” is the number of months since construction of the system; “Pops” is the population based on the 1990 census; “High Income” is the percent of households with income greater than \$50,000 in 1991. Sources: 1992 Survey of Buying Power Demographic USA, 1990 US Census and Cellular Communications Licensees (Wholesalers) Annual Reports to the Public Utilities Commission, State of California.